

oxalates, fluorides, ethylenediamine tetraacetic acid ("EDTA"), and the like. In addition, heparin may be used in conjunction with a neutral salt anticoagulant. Under typical circumstances, the anticoagulant of choice is acid-citrate-dextrose.

[0025] Typical precipitating agents will include, for example, polyethylene glycol, ammonium sulfate or ethanol, as well as such components as calcium chloride or magnesium chloride.

Detailed Description of the Invention

[0026] The following is a detailed description of a preferred embodiment of the principals of the present invention. In this embodiment, specific reagents, as well as specific volumes of an initial whole blood sample and reagents are identified. It is not, however, that the intention be restricted by these specifics, and the person of skill will recognize where substitutions of reagents, or varying volumes of both the initial blood sample and reagents may be utilized in accordance with the disclosed principals.

[0027] As previously stated, the process of the present invention involves:

- a. providing a volume of anticoagulated whole blood;
- b. providing appropriate volumes of one or more precipitating agents;
- c. mixing the anticoagulated whole blood and the one or more precipitating agents;
- d. incubating the mixture of step c.;
- e. centrifuging the resulting product of step d.; and *RECOVERING*
- f. ~~removing the packed clot obtained in step e.~~ and retaining the supernatant for use as a procoagulant.

[0028] In accordance with one preferred embodiment, the principals of the process of the present invention may be illustrated by:

- providing a small volume of whole blood which has been anticoagulated with acid-citrate-dextrose;
- providing a mixture of ethanol and calcium;
- combining the whole blood/ACD and EtOH/CaCl₂ in a glass tube; OR PLASTIC TUBE

- incubating the tube for a period of time until a clot is formed;
- centrifuging the tube to pack the clot at the bottom of the tube; and
- removing the supernatant fluid from above the clot, the supernatant being the desired procoagulant.

[0029] Preferably, the volume of anticoagulated whole blood used to prepare the procoagulant will be small, for example, as little as 8 to 10 ml.

[0030] The concentration of alcohol (*i.e.*, ethanol) used as a precipitating agent will preferably be between 10 % and 25 %. In the case of an 8 to 10 ml starting whole blood volume, this would indicate the use of 1 to 2 ml of 100% ethanol. The concentration of calcium chloride will preferably be about 10%, which in the illustrated embodiment would indicate the use of between 0.1 ml and 0.4 ml. For example, with a starting whole blood volume of 8 ml, a mixture of 1.5 ml ethanol and 0.1 ml of 10% CaCl_2 was used.

Calcium salts, preferably 10% CaCl_2

[0031] It is important to note that the container wherein the whole blood/ACD and EtOH/ CaCl_2 are mixed, will most ~~preferably~~ be formed of glass to enhance clotting action. *BUT PLASTIC CONTAINER IS ALSO EFFECTIVE*

[0032] With respect to the length of the incubation period required, in accordance with the illustrated set-up, a clot may be expected to form in the glass tube within an incubation period of between about 10 minutes and 30 minutes, and in fact was formed within a period of 8 to 22 minutes.

[0033] In a further embodiment, the initial volume of whole blood may be anticoagulated with a mixture of ACD and mannitol. The ratio of the two components will preferably be 7.5 mg mannitol per 1 ml ACD.

7.5 mg

[0034] TABLE 1 compares the parameters of the illustrated embodiment of the present invention with the previously defined parameters identified as being desirable for an improved procoagulant.